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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,705	02/25/2002	Gerhard Rueckert	4299/PCT	3988

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EXAMINER

HORTON, YVONNE MICHELE

ART UNIT PAPER NUMBER

3635

DATE MAILED: 02/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/069,705

**Applicant(s)**

RUECKERT, GERHARD

**Examiner**

Yvonne M. Horton

**Art Unit**

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26 and 40 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) 24,31,33-36,38,41 and 44-48 is/are objected to.
- 8) ☐ Claim(s) 21-23,25,27-30,32,37,39,42 and 43 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>see the marked exhibit</u> .           |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

The request filed on 12/01/04 for a Continued Examination Application (RCE) under 37 CFR 1.114 based on parent Application No. 10/069,705 is acceptable and a RCE has been established. An action on the RCE follows.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 27 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The beginning of claim 27 indicates that the third set of joints lie outside of the first surface. However, the end portion of claim 27 indicates that all of the joints of the first and third joint sets that are connected to at least one joint of the second joint set lie in one plane. It is not clear how the third joint set lies outside of the first surface and yet lies within the same plane as the joints of the first set that form the first surface.

Clarification is requested.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 21-23,25,28-30,32,37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #4,471,548 to GOUDIE. GOUDIE discloses the use

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of a variable support structure with a modular construction consisting of at least one collapsible support structure module, which is bounded by joints (10,12,20,22) of a first joint set, which are corner joints of the support structure module and lie in a first surface (FS), and by joints (14,16,24,26) of a second joint set, which are corner joints of the support structure module and lie in a second surface (SS), and with at least one joint (70,82,90) of a third joint set, which lies outside of the first surface and not located at a corner, whereby at least a portion of the joints of the first and second joint set is constrained and fixable in its position relative to one another, especially connectable with one another, by a guide mechanism (60,62,64,66) including scissor arrangements (40,42); (44,46); (50,52); and (54,56), characterized in that, one joint (70) of the third joint set is connected with at least two joints (10,12) and (14,16) of the first and second joint set, respectively, by a connecting elements (72,74) and (76,78) and is arranged below a lowermost joint (10,12) among the joints of the first joint set (10,12,20,22). GOUDIE discloses the basic claimed structure except he does not specify that the connection elements are tension only. Although GOUDIE is silent in this regard, he does mention that his connection elements are rigid. Rigidity implies the ability to encounter tension forces. Hence, although GOUDIE does not detail that the connection elements are tension-only, it would have been obvious from one having ordinary skill in the art at the time the invention was made that GOUDIE includes joint connections that transmits essentially only tension forces. A framework should only have enough rigidity to prevent it from being distorted or twisted, but enough rigidity that would allow it to stand and be contracted for storage. Thus, at certain intervals during applied forces

each element carries tension forces. The use intended for the structure would dictate or govern if any or all of the connection members would have the ability to be tension-only connections. The connection members determine the load distribution points and depending upon where and how the loads are required or needed to be carried or compromised would determine where, if anywhere, tension-only members would be disposed. Regarding claim 22, a joint (70) of the third joint set is connected with at least one joint (14,16) of the second joint set by a connecting element (76,78) that obviously transmits tension and compression forces. In reference to claim 23, the at least two joints (10,12) of the first and second joint set and the at least one joint (14,16) of the second joint set are connected with a common joint (70) of the third joint set. In reference to claim 25, the first (FS) and the second (SS) surfaces are planes. Regarding claim 28, the scissor arrangement of the guide mechanism comprises guide means (pivots), and in that at least one joint (20) of the first joint set of a corner of the module especially arranged on the outers circumference of the structure is connected by the guide (pivots) means with a joint (16) of the second joint set of a neighboring corner of the module opposite the first corner (20) especially arranged on the outer perimeter of the structure, and a joint (14) of the second joint set of the corner is connected by the guide means (pivots) with a joint (22) of the first joint set of a neighboring corner diagonally opposite the second corner (22). In reference to claim 29, the guide means (pivots) comprise connecting elements (40,42); (44,46); (50,52); and (54,5) that transmit tension and compression forces wherein connecting elements are crossed-over and pivotally connected with one another. Regarding claim 30, GOUDIE is silent with

regard to the transmission of tension and compression. It would have been obvious to one having ordinary skill in the art at the time the invention was made that the connecting elements (40,42); (44,46); (50,52); and (54,5) encounter and transmit some amount of tension and compression resulting from forces applied thereto. GOUDIE is also silent with regard to load capacity and diameter size of his connecting elements. It too would have been obvious to one having ordinary skill in the art at the time the invention was made to select a load capacity and diameter size suitable for the use intended as an obvious matter of design choice. For instance, depending upon the size of the load predicted to be imposed thereon, one skilled in the art would select a connecting element diameter size appropriate to withstand that predicted load size. In reference to claim 32, figure 3 clearly shows multiple modules (108,109,200,300,301,302) arranged next to one another; wherein the adjacent modules comprise joints similar to joints (10,12,20,22) and joints (14,16,24,26). Regarding claim 37, the first joint set (10,12,20,22); second (14,16,24,26); and the third joint set (70,82,90) are connectable by a membrane (400,401) in such a manner to close the first (FS) and second (SS) outer surfaces. In reference to claim 39, GOUDIE is silent with regards to the material used to form the connection members. However, the applicant has shown no criticality for the selection of one material as opposed to the other, As per the applicant's own admission, the type of material selected does not determine whether a member would be tension-only or a tension/compression member. Hence, it would have been obvious to one having ordinary skill in the art at the time the

invention was made to select a known material suitable for the use intended as an obvious matter of design choice.

Claims 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #4,471,548 to GOUDIE. GOUDIE discloses the use of a variable support structure with a modular construction consisting of at least one collapsible support structure module, which is bounded by joints (10,12,20,22) of a first joint set, which are corner joints of the support structure module and lie in a first surface (FS), and by joints (14,16,24,26) of a second joint set, which are corner joints of the support structure module and lie in a second surface (SS), and with at least one joint (70,82,90) of a third joint set, which lies outside of the first surface and not located at a corner, whereby at least a portion of the joints of the first and second joint set is constrained and fixable in its position relative to one another, especially connectable with one another, by a guide mechanism (60,62,64,66) including scissor arrangements (40,42); (44,46); (50,52); and (54,56), characterized in that, one joint (70) of the third joint set is connected with at least two joints (10,12) and (14,16) of the first and second joint set, respectively, by a connecting elements (72,74) and (76,78) and is arranged below a lowermost joint (10,12) among the joints of the first joint set (10,12,20,22). GOUDIE discloses the basic claimed structure except he does not specify that the connection elements are tension only. Although GOUDIE is silent in this regard, he does mention that his connection elements are rigid. Rigidity implies the ability to encounter tension forces. Hence, although GOUDIE does not detail that the connection elements are tension-only, it would have been obvious from one having ordinary skill in the art at the

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time the invention was made that GOUDIE includes joint connections that transmits essentially only tension forces. A framework should only have enough rigidity to prevent it from being distorted or twisted, but enough rigidity that would allow it to stand and be contracted for storage. Thus, at certain intervals during applied forces each element carries tension forces. The use intended for the structure would dictate or govern if any or all of the connection members would have the ability to be tension-only connections. The connection members determine the load distribution points and depending upon where and how the loads are required or needed to be carried or compromised would determine where, if anywhere, tension-only members would be disposed. Regarding claim 43, at least joints (10,14) include at least one of said first joints (10) and at least one of the second joints (14).

***Allowable Subject Matter***

Claims 24,31,33-36,38,41 and 44-48 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 26 and 40 are allowed.

Claim 27 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Response to Arguments***


Applicant's arguments with respect to claims 1-48 have been considered but are moot in view of the new ground(s) of rejection.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (703) 308-1909. The examiner can normally be reached on 6:30 am - 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Yvonne M. Horton  
Art Unit 3635  
2/16/05

# EXAMINER'S ATTACHMENT

U.S. Patent Sep. 18, 1984

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